

Type in the U. S. National Herbarium, no. 1,208,247, collected in damp forest in mountains near Fenix, Chiapas, Mexico, May, 1925, by C. A. Purpus (no. 316).

Although not marked by any outstanding characters, unless it be the large inflorescence and long pedicels, this plant seems distinct from any *Psychotria* of Mexico or Central America that is known to the writer.

ENTOMOLOGY.—*New termites from Guatemala, Costa Rica, and Colombia.* THOS. E. SNYDER, Bureau of Entomology, U. S. Department of Agriculture.

The seven new termites described in this paper were collected by Dr. W. M. Mann, of this Bureau, in the winter and spring of 1924, and by Mr. F. Neverman, of Costa Rica, late in 1924 and in 1925; a portion of this material has already been described.<sup>1</sup> In addition to descriptions of the new species, new geographical distribution records of known termites based on these collections are given.

Most of the new species represent "powder-post" termites or potential house termites, and may become of economic importance. The writer uses the term powder-post termites for certain groups in the family Kalotermitidae; the impressed pellets of finely digested, excreted wood fall from wood infested by these termites and reveal their presence. Such termites must be rigidly excluded and guarded against by Federal quarantines; they are likely to be introduced in furniture, and become cosmopolitan in distribution. *Kalotermes (Cryptoterme) brevis* Walker occurs from Florida in the United States to the West Indies, Central and South America, and South Africa.

Powder-post termites live in hard dry wood and are difficult to collect, hence, since they are not conspicuous, many new species are being found when specially sought after by such excellent collectors as Dr. Mann and Mr. Neverman. No single specimen was definitely designated as a holotype; since the specific descriptions were made from a series, these specimens are cotypes.

#### Family KALOTERMITIDAE

##### *Kaloterme (Rugiterme) costaricensis*, new species

*Winged adult.*—Head yellow-brown (light castaneous-brown), smooth, shining, longer than broad, sides almost parallel, rounded posteriorly, with fairly dense long hairs. Postclypeus white, tinged with yellow, short but broad. Labrum light yellow-brown, broader than long, broadly rounded to

<sup>1</sup> SNYDER, T. E.: *New American termites.* This JOURNAL 15: 152-162. 1925.

nearly straight at apex, with long hairs. Eye black, not round, fairly large and projecting, separated from lateral margin of head by a distance greater than the diameter of an eye. Ocellus hyaline, projecting, suboval, at an oblique angle to eye, from which it is separated by a distance equal to the long diameter of the ocellus.

Antenna light yellow-brown, whitish towards apex, with 17 to 20 segments; segments bead-like, or wedge-shaped, but becoming longer and broader toward apex; with long hairs; third segment longer than or subequal to second, but longer than fourth segment; last segment narrow, elongate, subelliptical.

Pronotum yellow (margins darker), not twice as broad as long, broadest at middle, roundly and shallowly concave both anteriorly and posteriorly; sides round, narrowed posteriorly, with scattered long hairs and denser short hairs.

Wings smoky dark brown, coarsely punctate. In forewing, median vein uniting almost directly with the radial sector; radial sector close to and parallel, and with seven branches to costal vein, first four long and oblique, others short; cubitus running parallel to radial sector, above middle of wing, to apex, with 11 branches or sub-branches to lower margin of wing; subcostal vein uniting with costa before middle of wing; seven irregular to crescentic transverse branches between cubitus and radial sector. In hind wing, median vein lacking; radial sector with two long and two short branches to costal vein; cubitus running to apex of wing with 10 branches or sub-branches to lower margin of wing; subcostal vein uniting with costa at about middle of wing; five irregular transverse branches between cubitus and radial sector.

Wing scale as long as pronotum.

Legs dark brown to fuscous (tarsi lighter), elongate, slender, hairs long.

Abdomen with tergites golden-yellow; tergites with fairly dense and fairly long hairs near base of each; cerci fairly elongate and prominent.

*Measurements*.—Length of entire winged adult, 11.5–12.25 mm.; length of entire dealated adult, 9–10 mm.; length of head (to tip labrum), 2.1 mm.; length of pronotum (where longest not at median line), 1.2 mm.; length of forewing, 8 mm.; length of hind tibia, 1.5 mm.; diameter of eye (long diameter), 0.37 mm.; width of head (at eyes), 1.8 mm.; width of pronotum, 2.05 mm.; width of forewing, 2.5 mm.

*Soldier*.—Head yellow-brown (light castaneous-brown, darker anteriorly and lighter posteriorly), cylindrical, markedly broadest anteriorly, sides slightly concave, with scattered long hairs, very dense on frontal slope or epicranial suture, where there is a median depression or groove. Eye spot hyaline, prominent, reniform, parallel to antennal socket. Gula about half as wide at middle as where widest anteriorly.

Mandibles black, base reddish-brown, broad at base, tips more slender, but fairly broad, pointed and incurved; left mandible with two fairly large sharp pointed marginal teeth on apical third, a small pointed tooth, a molar in the middle and a small blunt tooth near the base; right mandible with two large pointed marginal teeth, one in middle, the lower nearer the base; edge of right mandible roughened between apex and first tooth (Fig. 1).

Antenna yellow-brown to castaneous (lighter towards apex); with 15 segments, segments wedge-shaped, becoming longer and broader toward apex, with long hairs; third segment dark, markedly subclavate, longer than second or fourth segments; fourth segment about half as long as second; last segment elongate, slender, spatulate.

Pronotum yellow (margins darker), not quite twice as broad as long, broadest slightly anterior to middle; anterior margin broadly and roundly

concave; generally convex posteriorly except at middle where shallowly emarginate; sides narrowed posteriorly; pronotum with dense, fairly long hairs.

In some specimens, meso- and meta-nota with short wing pads.

Legs tinged with yellow; femora markedly swollen; three dark-colored spines at apex of tibiae.

Abdomen with tergites yellow to light yellow-brown; a row of fairly long hairs at base of each; cerci fairly elongate; styli present.

*Measurements*.—Length of entire soldier, 10–12.5 mm.; length of head with mandibles, 5.25 mm.; length of head without mandibles (to anterior margin), 3.5 mm.; length of left mandible, 1.8 mm.; length of pronotum, 1.45 mm.;



New species of *Kaloterms*. Mandibles of soldiers showing marginal teeth. (Camera lucida, high power.)

Fig. 1.—*Kaloterms (Rugitermes) costaricensis* Snyder

Fig. 2.—*Kaloterms (Calcaritermes) asperatum* Snyder

Fig. 3.—*Kaloterms (Calcaritermes) guatemalae* Snyder

length of hind tibia, 1.2 mm.; width of head (anteriorly), 2.1 mm.; width of head (posteriorly), 1.7 mm.; height of head at middle, 2 mm.; width of pronotum, 2.8 mm.

*Type locality*.—Hamburg Farm, Santa Clara Province, Costa Rica.

Described from a series of winged adults and soldiers collected with nymphs of the sexual form at the type locality on January 22, 1925, by Mr. F. Neverman in dead hardwood of Manic.

*Co-types, winged adult*.—Cat. No. 28655, U. S. N. M.; co-morphotypes, soldier.

The winged sexual adults of *K. (R.) costaricensis* are large and bicolored; and the soldier is also large.

#### *Kaloterms (Calcaritermes) asperatum*, new species

*Winged adult*.—Head castaneous-brown (lighter posteriorly and below eyes) smooth, shining, longer than broad, elongate, sub-oval, rounded posteriorly, a V-shaped marking at epicranial suture, with scattered, fairly long hairs. Eyes black, not round, but little projecting, separated from lower

margin of head by a distance less than the short diameter of an eye. Ocelli hyaline, suboval, close to eye.

Antenna light yellow-brown, with 12 segments, with long hairs; third segment subclavate, slender, longer than second or fourth segments; fourth segment bead-like; from fourth on segments becoming longer and broader toward apex; last segment elongate, slender, subelliptical.

Pronotum same color as head, shallowly concave anteriorly; posterior margin convex except for median emargination; sides narrow posteriorly; pronotum with scattered, long hairs.

Wings smoky, costal area darker (brown); tissue coarsely punctate; in forewing, median vein close to and parallel to subcosta; cubitus nearly in center of wing branching to apex, with about 11 to 12 branches or sub-branches to lower margin of wing; in hind wing, median branching from subcosta near base of wing.

Legs yellow (femora darker), slender, elongate; pulvillus present; legs with long hairs.

Abdomen with tergites castaneous-brown, a row of long hairs at base of each; cerci short, broad at base; styli present.

*Measurements.*—Length of entire winged adult, 5.8–6.2 mm.; length of entire deälated adult, 3.6 to 3.7 mm.; length of head (posterior margin to tip of labrum), 1.05 mm.; length of pronotum, 0.5–0.6 mm.; length of forewing, 4.2–4.3 mm.; length of hind tibia, 0.75–0.8 mm.; diameter of eye (long diameter), 0.25 mm.; width of head (at eyes), 0.75 mm.; width of pronotum, 0.7 mm.; width of forewing, 1.4 mm.

*Soldier.*—Head light castaneous-brown (with reddish tinge) to piceous on front (paler posteriorly), in profile head slightly concave in middle, short, cylindrical, front vertical to slightly projecting (overhanging) dorsally; head constricted (narrowed) dorsally at front, front scooped out; head with deep V-shaped median suture, lobes elevated, broadly rounded, and markedly roughened (tuberculate); head with transverse rows of long hairs anteriorly and in middle.

Eye spot not distinct, suboval. Gula blackish, not much narrowed in middle.

Mandibles blackish, short, broad at base, but pointed and incurved at apex; left mandible with two pointed marginal teeth near apex and a broad molar in middle; right mandible with two sharp-pointed teeth in middle (Fig. 2).

Antenna yellow-brown, with 10 segments, segments becoming longer and broader toward apex, with long hairs; third segment narrow, short, shorter than second or fourth segments; last segment slender, elongate, subelliptical.

Pronotum of same color as head; anterior margin deeply and roundly concave, roughened, with minute serrations or denticules; anterior corners high; posterior margin straight, except for median, round emargination; sides angularly narrow posteriorly.

Presternal processes dark colored.

Legs tinged with yellow; femora swollen; two chitinized spines and a spur at base of fore tibiae.

Abdomen with tergites yellowish, with a row of long hairs at base of each; cerci short.

*Measurements.*—Length of entire soldier, 3.8–4.7 mm.; length of head with mandibles, 1.55–1.75 mm.; length of head without mandibles (to anterior margin), 1.2–1.4 mm.; length of left mandible, 0.6 mm.; length of pronotum,

0.55–0.6 mm.; length of hind tibiae, 0.6 mm.; width of head (anteriorly), 0.85–1 mm.; width of head (posteriorly), 1–1.1 mm.; height of head at middle, 0.9–1. mm.; width of pronotum, 0.9–1 mm.

*Type locality*.—Hamburg Farm, Santa Clara Province, Costa Rica.

Described from a series of winged adults and soldiers collected with nymphs at the type locality by F. Neverman on May 15, 1925, in heartwood.

*Co-type, soldiers*.—Cat. No. 28656, U. S. N. M.; co-morphotypes, winged adult.

*Kalotermes*. (*C.*) *asperatum* is smaller than either *K.* (*Calcaritermes*) *imminens* Snyder and *recessifrons* Snyder from Colombia or *guatemalae* Snyder from Guatemala and Costa Rica.

#### *Kalotermes* (*Calcaritermes*) *guatemalae*, new species

*Winged adult*.—Head very dark castaneous-brown (with reddish tinge), (lighter below the eyes and anteriorly), smooth, shining, longer than broad, (broadly suboval), rounded posteriorly, with few scattered short hairs, and a row of long hairs posteriorly. Eye black, not round, projecting, separated from lower margin of head by a distance about equal to half the short diameter of an eye. Ocellus hyaline, suboval, very close to eye.

Antenna yellow-brown near base, whitish with yellow tinge towards apex, with 13 segments; segments wedge-shaped to bead-like, becoming longer and broader toward apex; with long hairs; third segment subclavate, longer than fourth segment but approximately subequal to second; last segment elongate, subelliptical.

Pronotum of same color as head; anterior margin broadly roundly emarginate (shallowly concave); anterior corners high; sides roundly narrow towards posterior margin, which is nearly straight; short hairs on anterior margin; a row of long hairs just posteriorly to middle and on posterior margin.

Wings dusky brown (smoky), costal veins darker; membrane coarsely punctate; in forewing, median vein close and parallel to subcostal vein; cubitus in about middle of wing, branching to apex with about 12 branches or sub-branches to lower margin; in hind wing, median originates from subcosta near apex.

Legs with coxae and femora dark castaneous-brown; tibiae and tarsi white with yellow tinge; legs slender and elongate.

Abdomen with tergites dark castaneous-brown, with a row of long hairs at base of each; cerci fairly prominent; styli present.

*Measurement*.—Length of entire winged adult, 8–8.25 mm.; length of entire dealated adult, 5 mm.; length of head (posterior margin to tip labrum), 1.4–1.45 mm.; length of pronotum, 0.7 mm.; length of forewing, 5.75 mm.; length of hind tibia, 1.1 mm.; diameter of eye (long diameter), 0.275 mm.; width of head (at eyes), 1.15–1.2 mm.; width of pronotum, 1–1.05 mm.; width of forewing, 1.8 mm.

*Soldier*.—Head castaneous-brown (lighter posteriorly and darker—to piceous—at anterior margin), elongate, cylindrical, thick, wider posteriorly than anteriorly, concave (dorsally) in middle in profile; head longer ventrally (2.40 mm.)—projecting to post-clypeus—than dorsally (2.25 mm.), where vertical; epicranial suture concave (hollowed out); head lobed medianly, a broad U-shaped cleft or suture, lobes but slightly roughened; head with few scattered long hairs. Eye spot hyaline, large, suboval, separated from antennal socket by a distance equal to its long diameter. Gula narrowed in middle.

Mandibles piceous, broad at base, sharp-pointed and incurved at apex; left mandible with three sharp-pointed marginal teeth, two near apical third, the other, larger tooth near middle; right mandible with two large pointed teeth near middle (fig. 3).

Antenna light yellow-brown near base (lighter anteriorly), with 12 segments; segments wedge-shaped, becoming longer and broader toward apex, with long hairs; third segment short, ring-like, shorter than second or fourth segments; last segment short, slender, suboval.

Pronotum castaneous-brown (margins darker), similar in shape to that of *K. (C.) emarginicollis* Snyder, but not quite so emarginate posteriorly, with scattered long hairs.

Legs tinged with yellow (femora darker and swollen); fore tibiae with spur.

Abdomen with tergites dirty white, tinged with yellow, a row of long hairs at base of each; cerci small; styli present.

*Measurements*.—Length of entire soldier, 6.5–7.5 mm.; length of head with mandibles, 3 mm.; length of head without mandibles (to anterior margin), 2.4 mm.; length of left mandible, 1 mm.; length of pronotum, 0.8–0.9 mm.; length of hind tibia, 0.9 mm.; width of head anteriorly, 1.5 mm.; width of head posteriorly, 1.7 mm.; height of head at middle, 1.4–1.5 mm.; width of pronotum, 1.5 mm.

*Type locality*.—Mixco, Guatemala.

Described from a series of winged adults collected with soldiers and nymphs at the type locality in May, 1924, by D. W. M. Mann. Other specimens of this termite (winged adults and soldiers) collected at Estrella, Costa Rica, in April, 1924, by Mann and soldiers at Bananito on April 20, 1925, by F. Neverman.

*Co-type, soldier*.—Cat. No. 23657 U. S. National Museum; co-morphotypes winged adult.

The soldier of *K. (C.) guatemalae* is similar to that of *K. (C.) emarginicollis* Snyder from Panama, but it is darker colored, larger, and has a wider head and a longer, and less deeply emarginate pronotum.

#### ***Kalotermes (Calcaritermes) thompsonae*, new species**

*Winged adult*.—Head yellow-brown or light castaneous-brown (slightly immature), shining, sides parallel, approximately suboval, with scattered short hairs and row of longer hairs posteriorly. Eye black, not round, projecting, separated from lower margin of head by a distance less than long diameter of eye; ocellus hyaline, suboval, close to and at an oblique angle to eye.

Antenna light yellow-brown at base, yellow at apex, with 13 segments, segments wedge-shaped, becoming longer and broader toward apex, with long hairs; third segment subclavate, longer than second or fourth segments; last segment elongate, narrow, subelliptical.

Pronotum of same color as head, broadly and roundly concave anteriorly; posterior margin nearly straight; sides angularly narrow posteriorly; margins with scattered short and long hairs.

Wings hyaline (slightly immature) costal area yellow-brown; membrane coarsely punctate; in forewing, median vein close to and parallel to subcosta; cubitus in about middle of wing, branching to apex of wing; with 11–12 branches or sub-branches to lower margin of wing; in hind wing, median originating from subcosta near base.

Legs yellow, elongate, slender, pulvillus present, hairs long.

Abdomen with tergites light yellow-brown, a row of long hairs at base of each tergite; cerci short.

*Measurements*.—Length of entire winged adult, 7–7.5 mm.; length of entire deâlated adult, 4.3–4.6 mm.; length of head (posterior margin to tip of labrum), 1.15–1.2 mm.; length of pronotum, 0.5–0.55 mm.; length of forewing, 5.4 mm.; length of hind tibia, 0.7 mm.; diameter of eye (long diam.), 0.25 mm.; width of head (at eyes), 0.9 mm.; width of pronotum, 0.85 mm.; width of forewing, 1.5 mm.

The winged adult of *K. (C.) thompsonae* is lighter colored and smaller than either *imminens* Snyder or *recessifrons* Snyder from Colombia.

*Soldier*.—Head castaneous to piceous on front, and yellow posteriorly, semicylindrical, nearly straight in profile, longer ventrally than dorsally; front of head with oblique slope, ventrally, seen from front, more or less shallowly concave, only slight outlines of a rim about median suture, which is broad, shallow, and V-shaped, lobes rounded and slightly roughened, with scattered short hairs anteriorly and a row of long hairs posteriorly. Eye spot indistinct. Gula narrowest at middle (where broadest in *K. (C.) recessifrons* Snyder from Colombia).

Mandibles piceous, short, broad at base, pointed and incurved at apex; left mandible with two sharp-pointed marginal teeth at apical third, another in middle; right with two larger pointed marginal teeth near middle.

Antenna light yellow-brown, with 11 segments, segments wedge-shaped, becoming longer and broader toward apex, with long hairs; third segment ring-like, shorter than second or fourth segments; last segment slender, elongate, semi-elliptical.

Pronotum light yellow-brown (margins darker), short, nearly twice as broad as long; anterior margin broadly, roundly concave; anterior corners high; posterior margin shallowly concave in center; sides nearly straight, narrow posteriorly; pronotum with but few scattered short hairs and a row of longer hairs posteriorly.

Presternal processes dark (yellow-brown).

Legs yellow, femora swollen, spur on fore tibiae.

Abdomen with tergites tinged with yellow, with a row of long hairs; cerci short.

*Measurements*.—Length of entire soldier, 4 mm.; length of head with mandibles, 1.8 mm.; length of head without mandibles (to anterior margin ventrally), 1.5 mm.; length of left mandible, 0.55 mm.; length of pronotum, 0.5 mm.; length of hind tibia, 0.55 mm.; width of head anteriorly, 0.9 mm.; width of head posteriorly, 0.95 mm.; height of head (at middle), 0.8 mm.; width of pronotum, 0.9 mm.

*Type locality*.—Hamburg Farm, Santa Clara Province, Costa Rica.

Described from a series of winged adults and a soldier collected with nymphs at the type locality on May 29, 1925, by F. Neverman in dead dry wood of standing tree.

*Co-type, soldier*.—Cat. No. 28658 U. S. National Museum; co-morphotypes winged adult.

The soldier of *K. (C.) thompsonae* has a shorter, more pointed mandible than in *recessifrons* Snyder and a shorter pronotum; it is smaller than *emarginicollis* Snyder from Panama.

Named in honor of the late Dr. C. B. Thompson of Wellesley College.

**Kalotermes** (*Glyptotermes*) **marlatti**, new species

*Winged adult*.—Head light castaneous-brown, punctate, shining, sides parallel; head suboval, with scattered long hairs. Eye black, not round, projecting, separated from lower margin of head by a distance less than the diameter of an eye. Ocellus hyaline, suboval, close and at an oblique angle to eye.

Antenna yellow-brown, with 11 segments, segments bead-like, becoming longer and broader toward apex, with long hairs; third segment subclavate, slightly longer than second or fourth segment; last segment elongate, subelliptical.

Pronotum of same color as head, broadly roundly concave anteriorly; anterior corners high; straight at posterior margins; sides angularly narrowed posteriorly; pronotum with scattered long hairs.

Wings dusky with golden tinge (costal area yellow-brown); tissue coarsely punctate; in forewing, median vein close to and parallel to subcosta; cubitus in about middle of wing, branching to apex, with about 12 branches or subbranches to lower margin; in hindwing, median originating from subcosta near base (at about basal fourth of wing).

Legs yellow, elongate, slender, with long hairs.

Abdomen with tergites castaneous-brown, with a row of long hairs at base of each; cerci short.

*Measurements*.—Length of entire winged adult, 6.2 mm.; length of entire deälated adult, 4.5 mm.; length of head (posterior margins to tip of labrum), 0.9 mm.; length of pronotum, 0.45 mm.; length of forewing, 4.5 mm.; length of hind tibia, 0.6 mm.; diameter of eye (long diameter), 0.225 mm.; width of head (at eyes), 0.75 mm.; width of pronotum, 0.65 mm.; width of forewing, 1.2 mm.

The winged adult of *K. (G.) marlatti* is lighter colored than that of *barbouri* Snyder of Panama.

*Soldier*.—Head light castaneous-brown (darker—piceous—anteriorly and lighter posteriorly), slightly concave in middle in profile, slightly longer ventrally than dorsally, markedly narrowed or constricted dorsally at front, front darker, nearly vertical, a deep U-shaped median suture, lobes darker, raised and slightly roughened; head with two transverse rows of long hairs. Eye spot hyaline, suboval. Gula narrowed at middle.

Mandibles piceous, short, broad at base, sharp and incurved at apex; left mandible with two sharp-pointed marginal teeth on apical third, another near middle; right mandible with two larger, pointed teeth near middle.

Antenna light yellow-brown, with 10–11 segments, segments wedge-shaped, becoming longer and broader toward apex, with long hairs; third segment small, ring-like; last segment slender, elongate, subelliptical.

Pronotum of same color as head, broadly roundly concave anteriorly, nearly straight at posterior margin, anterior corners high, sides narrow posteriorly, margins with long hairs.

Presternal processes light yellow-brown.

Legs yellowish, femora swollen, three castaneous chitinized spines at base of fore tibiae; legs with long hairs.

Abdomen with tergites dirty gray-white with yellowish tinge, with a row of long hairs on each; cerci fairly elongate.

*Measurements*.—Length of entire soldier, 4.25 mm.; length of head with mandibles, 1.65 mm.; length of head without mandibles (to anterior margin), 1.25 mm.; length of left mandible, 0.55 mm.; length of pronotum, 0.5 mm.; length of hind tibia, 0.5 mm.; width of head anteriorly, 0.75 mm.; width of



head posteriorly, 0.85 mm.; height of head (at middle), 0.75 mm.; width of pronotum, 0.8 mm.

*Type locality*.—Hamburg Farm, Santa Clara Province, Costa Rica.

Described from a winged adult and a soldier collected at the type locality by F. Neverman, February 1, 1925, in hardwood of Manú.

*Co-type, soldier*.—Cat. No. 28659 U. S. N. M.; co-morphotype, winged adult.

The soldier of *K. (G.) marlatti* is smaller than that of *angustus* Snyder of Panama; is close to *barbouri* Snyder but the head is not so high, and the marginal teeth on the left mandibles are sharp pointed and not molar, and also the pronotum is of slightly different shape.

Named in honor of Dr. C. L. Marlatt of the Federal Horticultural Board who carefully guards the United States against importation of foreign termites.

#### ***Kaloterme* (*Glyptoterme*) *nevermani*, new species**

*Soldier*.—Head light yellow, darker (yellow-brown) anteriorly, longer than broad, cylindrical, only slightly broader posteriorly than anteriorly, front obliquely, angularly sloping, a broad, rounded suture medianly, margins of lobes rounded, but slightly roughened, slightly elevated; head with several transverse rows of long hairs. Eye spot hyaline, large, suboval. Gula elongate, about half as wide in middle as where widest anteriorly.

Mandibles dark reddish-brown to piceous at tips, broad, narrowed, pointed and incurved at tips; left mandible with one pointed marginal tooth near apex, a molar with sharp point anteriorly and broader molar; right mandible with sharp-pointed tooth near middle and molar about as in *K. (G.) suturis* Snyder.

Antenna light yellow, (darker near base), with 10 to 12 segments, usually 11, segments becoming longer and broader (wedge-shaped) toward apex, with long hairs; third segment short, ring-like, shorter than second or fourth segments; last segment slender, elongate, subelliptical.

Pronotum yellow (margins darker), broadly and shallowly concave anteriorly, posterior margin nearly straight, anterior corners high, sides angularly narrowed posteriorly; hairs scattered, and long.

Presternal processes yellow.

Legs whitish, tinged with yellow, femora swollen, with long hairs.

Abdomen gray-white, with a row of long hairs at the base of each tergite, cerci fairly elongate; styli present.

*Measurements*.—Length of entire soldier, 5–6.25 mm.; length of head with mandibles, 2.5–2.7 mm.; length of head without mandibles (to anterior), 1.8–1.9 mm.; length of left mandible, 0.95 mm.; length of pronotum, 0.6–0.7 mm.; length of hind tibia, 0.9 mm.; width of head (dorsally) anteriorly, 1.2 mm.; width of head posteriorly, 1.25 mm.; height of head in middle, 1.2 mm.; width of pronotum, 1–1.05 mm.

*Type-locality*.—Western slope of the volcano Irazú, at 1500 meters, Costa Rica.

Described from three soldiers, collected with nymphs at the type locality by F. Neverman on February 22, 1925, in a dry stump.

*Co-type, soldiers*.—Cat. No. 28660 U. S. N. M.

*Kaloterme (G.) nevermani* is close to *K. (G.) suturis* Snyder, also from Costa Rica, but is larger and has more segments to the antenna; the winged adult is unknown.

## Family TERMITIDAE

*Capritermes* (*Neocapritermes*) *longinotus*, new species

*Soldier*.—Head yellow to pale yellow-brown, darker anteriorly and on sides, with a distinct dark median line running from posterior margin to epicranial suture, sides nearly parallel, but head broader posteriorly than anteriorly, rounded posteriorly, with fairly dense long hairs, especially anteriorly. Labrum of same color as head, elongate and faintly trilobed, broad at apex, narrowed in middle, long hairs on median lobe. Gula elongate, slender, about half as wide in middle as where widest anteriorly. Mandibles black, twisted, asymmetrical; left mandible longer than right.

Antenna yellow, with 16 segments, segments becoming longer and broader toward apex, longest in middle; with long hairs; third segment shorter than second, but approximately subequal to fourth segment, or slightly shorter; segments becoming markedly longer from seventh to twelfth segments, then becoming shorter; last segment elongate, slender, subelliptical.

Pronotum white with tinge of yellow, darker on anterior margin, very elongate anteriorly, high (saddle-shaped), and markedly roundly emarginate, hairs dense, and long.

Legs tinged with yellow, elongate, slender, with long hairs.

Abdomen dirty white, tinged with yellow; tergites with fairly dense long yellow hairs; cerci not elongate.

*Measurements*.—Length of entire soldier, 7.75–8 mm.; length of head with mandibles, 4.6 mm.; length of head without mandibles (to anterior margin), 2.4 mm.; length of left mandible, 2.2 mm.; length of pronotum, 0.85 mm.; length of hind tibia, 1.25 mm.; width of head (anteriorly), 1.3 mm.; width of head (posteriorly), 1.4 mm.; height of head at middle, 1.2 mm.; width of pronotum: 1.05 mm.

*Type locality*.—Rio Frío, Colombia.

Described from four soldiers collected with workers by Dr. W. M. Mann in February, 1924, at the type locality.

*Co-type, soldiers*.—Cat. No. 28661, U. S. N. M.

*Capritermes* (*N.*) *longinotus* is a very small species with a narrow head and a very long pronotum, which is markedly roundly, emarginate anteriorly; the winged adult is unknown.

LIST OF KNOWN OR DESCRIBED TERMITES COLLECTED BY MANN AND NEVERMAN  
IN GUATEMALA, COSTA RICA AND COLOMBIA

## Family KALOTERMITIDAE

*Cryptotermes dudleyi* Banks.

COSTA RICA:—San Jose, May 5, 1925, F. Neverman, colr. (winged adults flying at light in house)

## Family RHINOTERMITIDAE

*Coptotermes niger* Snyder

Guatemala, Bobas; May, 1924, Dr. W. M. Mann, colr. (soldiers and workers).

COSTA RICA, Colombiana; March, 1924, Dr. W. M. Mann, colr. (soldiers and workers). Hamburg Farm, Feb., 1925, F. Neverman, colr. (soldiers and workers); June 2, 1925 (winged soldiers and workers). Bananito, April 20, 1925, F. Neverman, colr. (soldiers and workers).

*Prorhinotermes molinoi* Snyder

COSTA RICA, Parisiana Ranch; Feb. 6, 1925, F. Neverman, colr. (soldiers and workers in rotten log).

## Family TERMITIDAE

*Cornitermes acignathus* Silvestri

COLOMBIA, Santa Anna; Feb., 1924, Dr. W. M. Mann, colr. (soldiers and workers).

*Armitermes chagresi* Snyder

COSTA RICA, Hamburg Farm; Jan., 1925, F. Neverman, colr. (soldiers and workers).

*Nasutitermes (Nasutitermes) columbicus* Holmgren

COSTA RICA, Hamburg Farm; Jan., 1925, F. Neverman, colr. (soldiers and workers).

*Nasutitermes (Nasutitermes) rotundatus* Holmgren

COLOMBIA, Rio Frio; March, 1924, Dr. W. M. Mann, colr. (soldiers and workers).

*Nasutitermes (Obtusitermes) panamae* Snyder

COLOMBIA, Rio Frio; Feb., 1924, Dr. W. M. Mann, colr. (two types of soldiers and workers).

*Amitermes beaumonti* Banks

GUATEMALA, Mixco; May, 1924, Dr. W. M. Mann, colr. (soldiers and workers).

*Microcerotermes exiguus* Hagen

COLOMBIA, Santa Anna; Feb., 1924, Dr. W. M. Mann, colr. (queen, soldiers and workers).

## SCIENTIFIC NOTES AND NEWS

The following lectures have been given in the Carnegie Institution's series since the last record in this JOURNAL: November 24, DR. ARTHUR L. DAY of the Geophysical Laboratory, *The Santa Barbara earthquake*; December 1, DR. HARALD U. SVERDRUP of Captain Amundsen's "Maud" Arctic-Drift Expedition, cooperating with the Department of Terrestrial Magnetism, *The scientific work of the "Maud" expedition, 1922-1925*; December 8, DR. ARTHUR S. KING of the Mount Wilson Observatory, *Laboratory methods of analysing spectra, with application to atomic structure*.

ERNEST F. BURCHARD of the U. S. Geological Survey has returned from a trip across South America from the Pacific to the Atlantic Coast, having examined iron-ore deposits in Misiones Territory and in Catamarca Province for the Argentine Government. On his return journey he visited the principal iron and manganese-ore deposits in central Minas Geraes, Brazil.

T. S. LOVERING has been appointed Junior Scientist in the Geological Survey.

The 1925 exhibition of current scientific work of the Carnegie Institution of Washington held during December 11 to 14 was attended by over 2,300 visitors. The exhibits shown may be classed into four groups: (1) Original materials or photographs of such materials on which research work was done; (2) methods, especially instrumental, for solving such problems; (3) models and simple experiments illustrating the principles on which a research problem is based; (4) tables, graphs, models, and other means of presenting results obtained by research work.